

What sorts of learning outcomes interest/motivate each of these stakeholder groups?

Parents: don't articulate outcomes well.

1. They have traveled and want students to have the pleasure. They assume it will be more than a tourist event. Most don't know, though, what they expect. But they expect some growth and maturity.
2. More than they got.
3. As much as they got.

2. What sorts of research needs should we be focusing on at this point?

A.General Considerations : importance of outcomes and rubrics.

Not always built into grant assessment pieces. Significant focus on counting beans (how many students going abroad, for example) and not assessing substance of the programs. Assumption of benefit of the program, but what is the benefit each program really wants to get for the students? Real issue is for this specific program what are the student learning outcomes desired? Then you can develop rubrics for the students (maybe with) to track the achievement of the outcomes. Rubrics among other tools, but the tools have to fit the specific program.

Language achievement gives access to a culture but doesn't guarantee absorption of anything much from the culture. Lack of language also doesn't necessarily mean lack of absorption. So you have to know what it is that you want the students to get.

At WPI We use rubrics for preparation (critical thinking, writing, teamwork) then graded and ungraded reports, on site including what looks like a thesis, oral presentations, reflective writing. Some sites have language experience attached, but language is learned over years and even our lang savy students don't necessarily do better than the ones that don't speak Spanish, for example. *Rubrics are* Not for graders only, Alerts students to something valued. Helps them develop the outcomes of the experience for themselves.

We later compare our -off campus students' reports site to site and to on-campus ones. International ones almost always better.

Ours is a two months of prep and two months on-site full time work/service experience, varying by site.

B. Areas of research needed

Interdisciplinary learning : Our projects address the juncture between societal impacts and technology. Address large questions, ask open-ended answers, improve critical thinking. It's not the students' learning of content of their discipline that we are concerned with but the way they think. Are they different from students who remain at home? What does this do to their intercultural development? Maybe nothing, but it improves their critical thinking.

Project examples: How can a community improve erosion control cheaply in Africa? How can the large electric monopoly of Costa Rica keep water sources clean so their dams and power plants aren't fouled? How can a village in northern Thailand bring computers to a village that has no electricity? How can Puerto Rico prevent exotic species from overrunning the island?

What standards or metrics now exist that allow us to assess student learning abroad? What standards still need to be identified.

The IDI EXISTS.. We haven't identified the characteristics that make people jump into a culture and be effective, but that is usually necessary for engineers and many business people. How can we predict what characteristics will make novice travelers successful in intercultural settings in work? Why do we have double and triple dippers?

Sue: Bangkok assessment program. Lots of reflective writing, guided discussions. Peer commentary on others reflections.

Use of IDI theoretical framework for formulation of reflections in Bangkok. Not much movement on those dimensions.

4. **Why are we doing this research?** And do the research standards we're using change, according to our research purpose?

Accountability: Can we defend our program----we are degree required projects.

Is it worth parents' money? Are we delivering what we promise? Are we delivering high quality? Are we offering something that other engineering programs cannot/do not offer by joining the social implications to the engineering and technology piece?

5. **What efforts are being made to implement the results of research studies—to have theory inform practice in the field?** That's what we do—Projects that bring together areas of science and technology with social implications..

Continuous Quality Improvement: all our projects are grounded in standard research.

Our **Outcomes** are improved writing, **development of critical thinking, development of team skills**..... They are based in organizations, who formulate the problem based on their own needs. Our students refine the sponsors' problems and reformulate into a research project. On-site they data collect, analyze, make recommendations and often implement.

We have talked about tracking the impact of the project itself and now on the international components. But we are also asking ourselves about **what other changes take place in our students as a result of the International experience besides what is tracked by the ISI, which focuses on changes as a result of adaptation to new cultures.**

Standard prep: *constant Collaboration among prep instructors*. Deliberate *mentoring of faculty* advisors---*training and workshops*, throughout the year (writing, commenting on writing, risk management, cultural sensitivity). *Outside judges (President IQP Award)*. This year--Associate Dean of the College, Dickenson College, Provost and Interim Dean of Undergraduate Studies, Consultant, Director, Office of Science &Technology, Partner, Accentrue; summer review of projects

Multi-layered approach to teaching and learning: Least well articulated at WPI. Just starting to get into it. ISI qualified person, did it on a very small sample, but now are talking about expanding it.